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1: Cell. 1995 Feb 24;80(4):661-70.

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The anticoagulation factor protein S and its relative, Gas6, are ligands for the Tyro 3/Axl family of receptor tyrosine kinases.

Stitt TN, Conn G, Gore M, Lai C, Bruno J, Radziejewski C, Mattsson K, Fisher J, Gies DR, Jones PF, et al.

Regeneron Pharmaceuticals, Incorporated, Tarrytown, New York 10591.

We report the identification of ligands for Tyro 3 (alternatively called Sky, rse, brt, or tif) and Axl (alternatively, Ark or UFO), members of a previously orphan family of receptor-like tyrosine kinases. These ligands correspond to protein S, a protease regulator that is a potent anticoagulant, and Gas6, a protein related to protein S but lacking any known function. Our results are reminiscent of recent findings that the procoagulant thrombin, a protease that drives clot formation by cleaving fibrinogen to form fibrin, also binds and activates intracellular signaling via a G protein-coupled cell surface receptor. Proteases and protease regulators that also activate specific cell surface receptors may serve to integrate coagulation with associated cellular responses required for tissue repair and growth, as well as to coordinate protease cascades and associated cellular responses in other systems, such as those involved in growth and remodeling of the nervous system.

PMID: 7867073 [PubMed - indexed for MEDLINE]

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- Identification of Gas6 as a ligand for Mer, a neural cell adhesion molecule related receptor tyrosine kinase implicated in cellular transformation. [Oncogene. 1997]
- Identification of the product of growth arrest-specific gene 6 as a common ligand for Axl, Sky, and Mer receptor tyrosine kinases. [J Biol Chem. 1996]
- Expression of the receptor protein-tyrosine kinases Tyro-3, Axl, and mer in the developing rat central nervous system. [J Comp Neurol. 2000]

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